

## BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Joint Application of Southern California Edison Company (U338E) and San Diego Gas & Electric Company (U902E) to find the 2014 SONGS Units 2 and 3 Decommissioning Cost Estimate Reasonable and Address Other Related Decommissioning Issues.

Application 14-12-007 (Filed December 10, 2014)

#### **DONNA GILMORE'S OPENING BRIEF**

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#### DONNA GILMORE'S OPENING BRIEF

#### I. INTRODUCTION

Pursuant to Rule 13.11 of the Commission's Rules of Practice and Procedure, Donna Gilmore submits her Opening Brief in proceeding A.14-12-007. For the reasons set forth below, the Commission should: (1) adopt Ms. Gilmore's proposed modifications to DCE's cost estimate for the Independent Spent Fuel Storage Installation (ISFSI) to account the system's uncertain lifespan and the DOE's uncertain pickup date; (2) deny SCE's procedural proposal for handling future SONGS decommissioning expenses as it applies to construction projects; and (3) find that the DCE does not provide an adequate basis for authorizing the withdrawal or expenditure of Decommissioning Trust funds on construction projects.

# II. THE DCE SHOULD BE MODIFIED TO TAKE INTO ACCOUNT THE ISFSI'S UNCERTAIN LIFESPAN AND USE A REASONABLE DOE ACCEPTANCE DATE

In order to take into account both uncertainty regarding the ISFSI's lifespan and uncertainty regarding the amount of time that the canisters will be stored on site, the DCE should be modified to ensure that sufficient trust funds are set aside to allow SCE to procure replacements for ISFSI elements that suffer age-related damage or degradation.

The Independent Spent Fuel Storage System (ISFSI) is the system that SCE plans to use to store spent fuel on-site at SONGS. SCE will be using a total of 118 canisters to store spent fuel from SONGS Units 2 and 3. A number of these canisters were purchased from Areva International and have already been loaded.<sup>1</sup> For the remaining canisters, SCE is using the Holtec HI-STORM UMAX system.<sup>2</sup> Both the Areva and the Holtec canisters are of a thin-steel design, meaning that they are constructed of 5/8" thick stainless steel.<sup>3</sup>

In this proceeding, the Commission has a statutory duty to review "all cost estimates, the basis for the cost estimates, and all assumptions about the remaining useful life of the nuclear facilities." In addition, the Commission has a duty to ensure that "customers are charged only for costs that are reasonably and prudently incurred." This duty includes a utility's withdrawal and spending of decommissioning trust funds, as the trust is composed of ratepayer money.

While the DCE includes costs associated with maintaining the ISFSI, it does not, include funds for the replacement of major components.<sup>6</sup> As such, the DCE is based, in part, on the

<sup>&</sup>lt;sup>1</sup> Exhibit 39, Prepared Direct Testimony of Donna Gilmore, p.5, line 13 through p. 6, line 17

<sup>&</sup>lt;sup>2</sup> Exhibit 39, Prepared Direct Testimony of Donna Gilmore, p. 4, lines 12-17

<sup>&</sup>lt;sup>3</sup> Exhibit 39, Prepared Direct Testimony of Donna Gilmore, p. 6, lines 20-31

<sup>&</sup>lt;sup>4</sup> Cal. Pub. Util. Code Section 8327

<sup>&</sup>lt;sup>5</sup> Cal. Pub. Util. Code Section 8322(f)(3)

<sup>&</sup>lt;sup>6</sup> Exhibit 40, Gilmore Late-Filed Exhibit, p. 9, SCE response to Gilmore Data Request 48

assumption that all of the major components of the ISFSI will remain intact, without requiring replacement, for the duration of the decommissioning process. In this proceeding Ms. Gilmore has established that this assumption is unreasonable and imprudent, as aging/degradation issues and uncertainty regarding the DOE's pickup date raise significant uncertainty that the canisters will last for the duration of decommissioning.

### A. The ISFSI canisters lifespan is uncertain in light of aging and degradation issues

Ms. Gilmore has established that the Areva thin-steel canisters that SCE is using at SONGS and the Holtec thin-steel canisters that SCE plans to use are susceptible to significant aging and degradation issues. These issues raise significant uncertainty regarding the canisters' ability to last the duration of decommissioning without requiring replacement.

The NRC licensing does not provide any evidence that the canisters will last beyond 20 years. The NRC has only licensed the Holtec canisters for a 20-year term.<sup>7</sup> In this initial licensing the NRC specifically excluded the consideration of aging issues beyond this 20-year timeframe.<sup>8</sup> There is no evidence from the NRC that the canisters will last beyond 20 years, as there is no guarantee that NRC will renew the canisters' license, and the NRC has not even considered the question of the canisters' lifespan beyond that 20-year period.<sup>9</sup>

Gilmore has established that the canisters that SCE intends to use are susceptible to chloride stress corrosion cracks (SCCs). SCCs occur when dust and aerosols in the air are deposited on the canisters, over time leading to an accumulation of chloride salt deposits on the

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<sup>&</sup>lt;sup>7</sup> Federal Register, Vol. 80, No. 44, pp. 12073-12078 (March 6, 2015).

<sup>&</sup>lt;sup>8</sup> Exhibit 39, Prepared Direct Testimony of Donna Gilmore, p. 8, line 24 through p. 9, line 2

<sup>9</sup> Id.

canisters' surfaces.<sup>10</sup> These deposits cause corrosion, leading to the formation of microscopic cracks.<sup>11</sup> Three conditions must be present for SCC to occur: (1) a corrosive environment, characterized by high salt content and humidity; (2) tensile stress (as observed in welded canisters); and (3) a susceptible material, such as 201, 301, 302, 304, 309, and 316 steel.<sup>12</sup>

All of the conditions for SCC are present at SONGS. SCE is planning on placing the ISFSI in a high-chloride, high moisture marine environment, and the thin-steel canisters that SCE will be using are stainless steel that is susceptible to SCC.<sup>13</sup>

Gilmore has established that all canisters with SCC must be replaced. Under NRC regulations, a canister cannot be used if it has more than a 75% through-wall crack. <sup>14</sup> A canister with a 75% crack must be replaced immediately in order to continue storing its spent fuel. In addition, all canisters with any level of SCC must be replaced prior to their removal from the ISFSI, as NRC regulations prohibit the transport of canisters with any kind of crack. <sup>15</sup> Cracked canisters must be replaced, rather than repaired, because no technology exists for repairing cracked canisters once the canisters are loaded with spent fuel. Dr. Kris Singh, the president of Holtec International, has admitted that it is not feasible to repair damaged canisters that are loaded with spent fuel because of the difficulty of locating microscopic cracks, the difficulty of repairing a canister in the face of leaking radiation, and the fact that repairing a microscopic crack would create a rough surface that would become a new creation site for corrosion down the road. <sup>16</sup>

<sup>&</sup>lt;sup>10</sup> Exhibit 39, Gilmore Opening Testimony, p. 13, line 17 through p.14, line 5

<sup>&</sup>lt;sup>11</sup> Exhiibt 39, Gilmore Opening Testimony, p. 12

<sup>&</sup>lt;sup>12</sup> Exhibit 39, Gilmore Opening Testimony, p. 11

<sup>&</sup>lt;sup>13</sup> Exhibit 39, Gilmore Opening Testimony, p. 11

<sup>&</sup>lt;sup>14</sup> NUREG 1927 Revision 1, Page B-8

<sup>&</sup>lt;sup>15</sup> 10 CFR Section 71.85

<sup>&</sup>lt;sup>16</sup> Exhibit 39, Gilmore Opening Testimony, p. 25, lines 1-22

Gilmore has established that SCC may occur during the timeframe that the canisters will be stored at SONGS. It can take as little as two years for the conditions for SCCs to develop. The conditions for stress corrosion cracking have been found on a two-year old canister at Diablo Canyon.<sup>17</sup> Once a SCC initiates, it can take as little as 16 years to go through-wall.<sup>18</sup> Koeberg nuclear plant in South Africa had a similar component fail in 16 years.<sup>19</sup> The component had multiple cracks up to .61" deep, resulting in the container leaking.<sup>20</sup> Both Diablo Canyon and Koeberg are located coastal environments similar to San Onofre.

## B. The Commission should reject the DCE's 2024 spent fuel acceptance assumption and instead use the NRC's conservative assumption

The DCE assumes that the Department of Energy will begin accepting spent fuel in 2024.<sup>21</sup> This assumption is unreasonable and unsupported by the evidence. The Commission should require that DCE be modified to adopt a reasonable, evidence-based pickup date assumption, and that all schedules and expenses set forth in the DCE be modified to reflect this new assumption.

SCE's sole argument in support of this assumption is that the 2024 DOE pickup date was used in SCE and PG&E's 2012 Decommissioning Cost Estimates, and SCE has admitted that it has no evidence in support of this assumption beyond the fact that the assumption was used in 2012.<sup>22</sup>

<sup>&</sup>lt;sup>17</sup> Exhibit 39, Gilmore Opening Testimony p. 16, lines 8-18

<sup>&</sup>lt;sup>18</sup> Exhibit 39, Gilmore Opening Testimony, p. 17, lines 6-12

<sup>&</sup>lt;sup>19</sup> Exhibit 39, Gilmore Opening Testimony, p. 17, line 14 through p. 18, line 17.

<sup>&</sup>lt;sup>20</sup> Id.

<sup>&</sup>lt;sup>21</sup> Exhibit 1, SCE-01, Appendix A-1 (Decommissioning Cost Estimate), p. A-1 - 26

<sup>&</sup>lt;sup>22</sup> Evid. Hearing Transcript p. 61, lines 1-27, (Peffer X SCE Witness Palmisano)

SCE has not supported this assumption with any evidence regarding the current status of proposed, real-world spent fuel storage facilities. Before a real-world facility can accept spent fuel, it must receive funding, legislative and regulatory approval, survive the many likely legal challenges, and actually be constructed. A 2024 acceptance date would require that all of these steps be completed within 9 years. SCE has failed to support its assumption with any evidence of real-world projects that could plausibly be completed within this short timeframe.

In fact, SCE has contradicted its position, admitting that "due to the DOE's lack of progress in siting and construction of its repository, this schedule is likely to be extended in future updates to the SONGS 2 and 3 decommissioning cost estimate." SCE admits that "due to the lack of a federal repository for high level waste, no definitive estimate can be provided for the length of time on-site storage will be required." In cross examination, SCE further clarified that while the acceptance date is unknowable, it is is *most likely* going to be later than 2024. It is neither reasonable nor prudent for the Commission to approve a DCE whose schedule and costs are driven by an assumption that SCE knows is most likely inaccurate.

SCE's position is especially unreasonable in light of the fact that, according to the NRC, it is "most likely" that a spent fuel repository won't be available for 60 years. <sup>26</sup> The NRC refers to 60 years of continued storage after a plant's decommissioning as "short-term storage." Rather than relying on SCE's unlikely 2024 assumption, it is reasonable and prudent for the Commission to use the NRC's "most likely" 60-year pick up date assumption.

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<sup>&</sup>lt;sup>23</sup> Exhibit 1, SCE-01, p. 25

<sup>&</sup>lt;sup>24</sup> Exhibit 40, Gilmore Late-Filed Exhibit, p. 9, SCE response to Gilmore Data Request 48.

<sup>&</sup>lt;sup>25</sup> Evid. Hearing Tran. p. 311, line 16 through p. 321, line 21 (Ray Lutz X SCE Witness Bledsoe)

<sup>&</sup>lt;sup>26</sup> NRC, NUREG-2157, Volume 1, p. XXX, available at: http://pbadupws.nrc.gov/docs/ML1419/ML14196A105.pdf <sup>27</sup> id.

### C. The Commission should adjust the DCE's estimate to account for the ISFSI lifespan and use a reasonable DOE acceptance date

On August 27, 2015, ALJ Bushey issued a ruling allowing Donna Gilmore include her recommendation on the contingency factor to be applied to the dry cask storage system in her opening brief.<sup>28</sup> In accordance with this ruling, Ms. Gilmore recommends that the DCE be adjusted to set aside \$287,438,265 for the replacement of dry storage canisters that become unusable. In light of the uncertainty regarding the lifespan of the canisters and uncertainty regarding the DOE acceptance date, it is prudent and reasonable for the Commission to ensure that sufficient decommissioning trust funds are set aside to replace canisters that become damaged and unusable. This adjustment to the DCE should be made either as a separate line item, or the contingency factors for the DCE Line Numbers listed in Table 1 should be increased to cover the full \$287 million.

These proposed adjustments assume that replacing a canister will involve three major cost categories: (1) procuring and fabricating the replacement canister; (2) unloading and disposing of the damaged canister; and (3) delivering and loading the new canister. The DCE includes budget categories for steps 1 and 3:<sup>29</sup>

Table 1

DCE Line	<b>Item Description</b>	<b>Total Cost</b>	<b>Combined Cost -</b>	Per Unit Cost
Number			Units 2 and 3	
SFM-2-D-	Procure & Fab Fuel	62,015,625		
8.10	Canisters & AHSM –			
	U2		125,507,813	1,063,625
SFM-2-D-	Procure & Fab Fuel	63,492,188		
8.11	Canisters & AHSM –			
	U3			
SFM-2-D-	Del/Load Fuel	111,020,560		
8.12	Canister, ISFSI Trans			

<sup>&</sup>lt;sup>28</sup> Evid. Hearing Tr., p. 525, line 22 through p. 526, line 1.

<sup>&</sup>lt;sup>29</sup> Exhibit 40, Gilmore Late-Filed Exhibit, pp. 21-22, SCE response to Gilmore Data Request 54

	- U2		224,684,466	1,904,105
SFM-2-D-	Del/Load Fuel	113,663,906		
8.13	Canister, ISFSI Trans			
	– U3			

The estimate then calculates the per-unit cost for each budget category by taking the combined Unit 2 and 3 cost for each activity and dividing by 118, the total number of canisters that SCE intends to procure.<sup>30</sup> Because the DCE does not have a budget category that directly corresponds to unloading and disposing of a damaged canister, this estimate uses the Deliver/Load Fuel Canister costs as a reasonable equivalent.

The per-unit costs for replacement canisters are as follows:

Procure & Fabricate Fuel Canisters: \$1,063,625

Unload and Dispose of Damaged Canister: \$1,904,105

Deliver and Load Replacement Canister: \$1,904,105

Total Per Unit = \$4,871,835

The estimate next applies this per unit factor to a prudent estimated failure rate of 20% under the SCE's unsupported 2024 DOE acceptance date assumption and 50% under the NRC's "most likely" 60 year estimate. The estimated failure rate is a prudent assumption based on the canisters' susceptibility to corrosion, the corrosive marine environment at SONGS, the fact that it is not possible to repair damaged canisters, and the fact that all damaged canisters must be replaced before being removed by the DOE. The failure rate under the 60 year estimate is higher because the longer the canisters are stored at SONGS, the more they will be exposed to the corrosive marine environment, and the greater the likelihood of SCCs developing.

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<sup>&</sup>lt;sup>30</sup> Exhibit 1, SCE-01, Appendix A-1 (Decommissioning Cost Estimate), p. A-1 - 45

The estimate applies the prudent estimated failure rate the total number of canisters stored at SONGS (118 canisters) to calculate the total adjustment required:

Table 2

	<b>Prudent Estimated</b>	Est. Canister	Total Adjustment
	Failure %	Failures	
Unlikely 2024	20%	23	\$112,052,205
Assumption			
Most Likely	50%	59	\$287,438,265
60-year			
Assumption			

It is prudent and reasonable for the Commission to adopt the most likely 60-year assumption, and require that SCE keep a total of \$287,438,265 in the nuclear decommissioning trust as a reserve to address possible canister failures.

### III. SCE'S PROCEDURAL PROPOSAL SHOULD BE REJECTED AS IT APPLIES TO CONSTRUCTION PROJECTS

SCE has presented the Commission with a procedural proposal that would allow it to withdraw hundreds of millions of dollars in ratepayer money from the decommissioning trust and spend this money on major construction projects without having those projects undergo any prior reasonableness review by the Commission. This proposal is unreasonable and should be rejected by the Commission.

SCE has presented the Commission with a three-part procedural proposal regarding the handling of the SONGS decommissioning going forward. First, under this proposal the Commission would continue to consider the reasonableness of DCE's in a triennial proceeding.<sup>31</sup>

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<sup>&</sup>lt;sup>31</sup> Exhibit 1, SCE-01, pp. 43-44

Second, at least once a year SCE would submit an advice letter seeking disbursements from the decommissioning fund.<sup>32</sup> Third, each year the Commission would conduct an after-the-fact reasonableness review of all decommissioning projects that were completed in the prior 12 months.<sup>33</sup> SCE further proposes that in the after the fact reasonableness review, all expenditures that fall below SCE's cost estimate be presumed reasonable, shifting the burden of proof to parties challenging SCE.<sup>34</sup>

SCE has included the costs associated with three major construction projects in the DCE: (1) the Independent Spent Fuel Storage Installation (ISFSI) construction project; (2) the Cold and Dark construction project; and (3) spent fuel island construction project.<sup>35</sup> SCE has admitted that the costs presented in this table are construction project costs, not radiological decommissioning costs. Under cross-examination, SCE witness Bledsoe stated:

These costs [set forth in Table 2, above] actually pertain to a construction project, not – or it includes a construction project, not a decommissioning or demolition project per se 36

Bledsoe further differentiated between decommissioning costs and the ISFSI construction project costs, stating that "the decommissioning project as a whole will remove and dispose of all of the structures, improvements, appurtenances, etcetera, that the utilities installed at the plant site... in order to operate the nuclear power facility" while the ISFSI "is a new construction project." 37 None of these major construction projects have undergone any independent reasonableness review by the Commission.

<sup>&</sup>lt;sup>32</sup> Id., p. 37 <sup>33</sup> Id., p. 43

<sup>&</sup>lt;sup>34</sup> Id., p. 45

<sup>&</sup>lt;sup>35</sup> Transcript p. 289, Line 18 through p. 289, line 25 (Peffer X SCE Witness Bledsoe)

<sup>&</sup>lt;sup>36</sup> Transcript p. 289, Line 18 through p. 289, line 25 (Peffer X SCE Witness Bledsoe)

<sup>&</sup>lt;sup>37</sup> Transcript p. 290. Line 13 through p. 290. line 27 (Peffer X SCE Witness Bledsoe)

Under SCE's proposal, SCE would be required to go through two procedural steps before withdrawing and spending trust funds on major construction projects. First, the projects would be included in the Decommissioning Cost Estimate and considered as part of the Triennial DCE proceeding. Second, SCE would seek Commission approval for trust withdrawals through the advice letter process. Neither of these steps is anything close to the kind of reasonableness review required to protect ratepayers and ensure that trust funds are used in a reasonable and prudent manner.

The Triennial DCE proceeding does not include a reasonableness review of the proposed construction projects. The purpose of the Triennial review is to consider the reasonableness of the Decommissioning Cost Estimate. As Ms. Gilmore has been repeatedly reminded in this proceeding, this does not include a substantive review of the reasonableness of the cost of construction projects included in the DCE.

The advice letter process does not provide a legitimate substitute for a reasonableness review. The purpose of the advice letter process is to provide "a quick and simplified review of the types of utility requests that are expected neither to be controversial nor raise important policy questions." The reasonableness of the costs associated with major construction projects, including the \$405 million ISFSI, is unquestionably an issue of significant ratepayer interest that is likely to raise controversy and important policy questions.

Under SCE's proposal, the construction projects would not go through any meaningful reasonableness review until the after-the-fact reasonableness review, which would not occur until the decommissioning activities associated with the projects were completed, and ratepayers' money was already spent.

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<sup>&</sup>lt;sup>38</sup> CPUC General Order 96b, Section 5.1, p. 8

This violates both the California Nuclear Facility Decommissioning Act and the Commission's duty to ensure just and reasonable rates. Section 8322(f)(3) of the Act requires that payments for decommissioning be structured so that customers are only charged for costs that are reasonably and prudently incurred. Under SCE's procedural proposal, payments of ratepayer money from the Decommissioning trust would be made for major construction projects without any prior review to ensure that the construction costs are reasonable and prudent.

SCE's procedural proposal is inconsistent with the Commission's duty to ensure just and reasonable rates. Ratepayers are entitled to the same level of protection for decommissioning trust funds that they are for normal rates, and withdrawals from the trust must be just and reasonable. Public Utilities Code Section 451 states that "All charges demanded or received by any public utility... for any product or commodity... or any service rendered shall be just and reasonable." The decommissioning trust is composed entirely of ratepayer money. When this money is collected from ratepayers, it is not *received* by the utility for any product, commodity, or service. Instead, it is held in trust for the ratepayers' benefit. When a utility withdraws money from the trust for a decommissioning activity, it receives the ratepayer money for the service of decommissioning the plant. As such, under Section 451, withdrawals from the trust must be just and reasonable. There is no basis for applying a lower standard to utility expenditures of decommissioning trust funds than is normally applied to the normal collection and expenditure of ratepayer funds by utilities.

As such, the Commission should reject SCE's procedural proposal and require a full reasonableness review of all construction projects before allowing SCE to withdraw and spend decommissioning trust funds on such projects.

## IV. THE DCE DOES NOT PROVIDE A REASONABLE BASIS FOR AUTHORIZING THE USE OF DECOMMISSIONING TRUST FUNDS FOR THE ISFSI CONSTRUCTION PROJECT

As the ISFSI estimate was not calculated using a reasonable methodology and is based on vendor-supplied "rough conceptual estimates" with a low level of accuracy. In light of the availability of actual cost information for the ISFSI project that was available at the time this application was filed, it is unreasonable to use the DCE's ISFSI estimate as the basis for authorizing SCE to withdraw and/or spend decommissioning trust funds on the ISFSI project.

### A. The ISFSI costs were not estimated using a reasonable methodology

ISFSI costs were not estimated using a reasonable and generally accepted methodology, and it is not reasonable or prudent for the Commission to authorize the withdrawal or expenditure of any trust funds for the \$405 million ISFSI project cost based on the DCE.

The decommissioning costs estimated in the DCE were independently calculated by EnergySolutions using a proprietary version of the Universal Cost Factor (UCF) methodology established in AIF/NESP 036 and the Department of Energy Cost Estimating Manual.<sup>39</sup>

In contrast, the DCE's \$405 million ISFSI cost estimate was neither independently calculated by EnergySolutions nor calculated using an established methodology. SCE provided the ISFSI cost figures to EnergySoutions, which adopted the figures as an "assumption" in the DCE. Assumption 21 of the DCE states that "the costs for ISFSI construction and the transfer of

<sup>&</sup>lt;sup>39</sup> Exhibit 1, SCE-01, Appendix A-1 (Decommissioning Cost Estimate), p. A-1 - 11

spent fuel from Units & 3 to dry storage were developed by SCE and furnished to EnergySolutions."<sup>40</sup>

SCE provided EnergySolutions with the ISFSI figures in a January 27, 2014 email. In this email, SCE identified a cost of \$265 million for the "move to storage" which includes "not only the costs of the canisters and modules, but other activities such as the inspection of fuel, characterization of fuel and trash, development of loading plans, [and] processing of CEA's for storage in the canisters." SCE also identified a separate, \$35 million estimate for the expansion of the ISFSI to include a new hardened security post. EnergySolutions used these two estimates, combined with a 25% contingency, as the \$405 million ISFSI construction cost assumption. As

Neither of the ISFSI cost figures that SCE provided to EnergySolutions were calculated or developed using an established decommissioning cost estimating methodology. In response to a data request from Ms. Gilmore, SCE stated that the \$265 million figure provided to EnergySolutions in the January 27, 2014 email "was based on the highest value from the rough order of magnitude proposals provided by the three vendors, and a rough order of magnitude estimate of the SONGS oversight required for the project." Similarly, SCE stated that the \$35 million referenced in the email was "based on the highest value from the rough order of magnitude proposals that were provided by three vendors."

The Department of Energy's Cost Estimating Guide adopts a 5-level system for classifying cost estimates, ranging from Order of Magnitude estimates (the least defined) to

<sup>&</sup>lt;sup>40</sup> Exhibit 1, SCE-01, Appendix A-1 (Decommissioning Cost Estimate), p. A-1 - 26

<sup>&</sup>lt;sup>41</sup> Exhibit 40, Gilmore Late-Filed Exhibit, p. 26

<sup>42</sup> Id

<sup>43</sup> Id

<sup>&</sup>lt;sup>44</sup> Id. p. 29, SCE response to Gilmore Data Request 139

<sup>&</sup>lt;sup>45</sup> Id. p. 31, SCE response to Gilmore Data Request 140

Definitive estimates (the most defined).<sup>46</sup> This system is set forth in the following table from the DOE Guide:<sup>47</sup>

Table 2-2. Cost Estimate Classifications

	Primary Characteristics		
Cost Estimate Classification	Level of Definition (% of Complete Definition)	Cost Estimating Description (Techniques)	
Class 5, Order of Magnitude	0% to 2%	Stochastic, most parametric, judgment (parametric, specific analogy, expert opinion, trend analysis)	
Class 4, Intermediate	1% to 15%	Various, more parametric (parametric, specific analogy, expert opinion, trend analysis)	
Class 3, Preliminary	10% to 40%	Various, including combinations (detailed, unit-cost, or activity-based; parametric; specific analogy; expert opinion; trend analysis)	
Class 2, Intermediate	30% to 70%	Various, more definitive (detailed, unit-cost, or activity-based; expert opinion; learning curve)	
Class 1, Definitive	50% to 100%	Deterministic, most definitive (detailed, unit-cost, or activity-based; expert opinion; learning curve)	

Order of magnitude estimates are for "future work that has not been well defined" and are "based on the least amount of available information and may portray a low level of confidence or accuracy." Order of magnitude estimates are only appropriate for projects with a 0% to 2% level of definition. Thus, the rough order of magnitude vendor proposals that SCE relied upon to develop its estimate have only the most tenuous relationship to actual project costs. While such estimates may be useful for determining contributions to the decommissioning trust early in the planning stages, it is neither reasonable nor prudent to allow SCE to withdraw and spend decommissioning trust funds based on an estimate with such an insubstantial basis.

<sup>&</sup>lt;sup>46</sup> Department of Energy, Cost Estimating Guide, DOE G 430.1-1X, p. 14

<sup>47</sup> Id

<sup>&</sup>lt;sup>48</sup> ld. at p. 16

<sup>&</sup>lt;sup>49</sup> Id. at p. 15

### B. Significantly more accurate cost information is available

It would be imprudent and unreasonable for the Commission to allow SCE to withdraw and spend trust funds on the ISFSI construction project based on its vendors' "rough conceptual estimates" when far more accurate and concrete information that is currently available.

On December 5, 2014 SCE entered into a contract with Holtec International to construct the ISFSI. <sup>50</sup> The Holtec contract contains the actual, agreed-upon price terms for the ISFSI construction project. These actual price terms are far more accurate and concrete than the vendor's rough order of magnitude estimates that were adopted as an assumption in the DCE.

SCE filed its application in this proceeding on December 10, 2015, 5 days after it entered into the Holtec contract. Despite this, SCE has made no attempt to update its application, its testimony, or the DCE with this significantly more accurate and concrete information. SCE would have the Commission allow the withdrawal and expenditure of hundreds of millions of ratepayer dollars based on a rough estimate from a vendor. Allowing such withdrawals would be neither reasonable nor prudent.

#### V. CONCLUSION

For the reasons set forth above, the Commission should: (1) adopt Ms. Gilmore's proposed modifications to DCE's cost estimate for the Independent Spent Fuel Storage Installation (ISFSI) to account the system's uncertain lifespan and the DOE's uncertain pickup date; (2) deny SCE's procedural proposal for handling future SONGS decommissioning expenses as it applies to construction projects; and (3) find that the DCE does not provide an

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<sup>&</sup>lt;sup>50</sup> Exhibit 40, Gilmore Late-Filed Exhibit, p. 26

adequate basis for authorizing the withdrawal or expenditure of Decommissioning Trust funds on construction projects.

Respectfully Submitted,

Dated: October 15, 2015 /S/

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